

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 10/669,931	§	Examiner:	Puente, Emerson C.
Filed: September 24, 2003	§	Group/Art Unit:	2113
Inventor(s):	§	Atty. Dkt. No:	5760-13900/VRTS
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P. Saptarshi, and Craig W. Hobbs	§		
	§		
	§		
Title: Providing High Availability	§		
for an Application by	§		
Rapidly Provisioning a	§		
Node and Failing Over to	§		
the Node	§		
	§		
	§		

REPLY BRIEF TO EXAMINER'S ANSWER

Mail Stop Appeal Brief - Patents

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir/Madam:

This Reply Brief is filed in Response to the Examiner's Answer mailed on July 17, 2007.

As noted in Section 6 of the Examiner's Answer, the rejection of claim 25 has been recategorized from the Second Ground to the Third Ground of Rejection. Appellant confirms that the Examiner called the undersigned and that the undersigned agreed to the recategorization.

REMARKS

The Response to Argument section (section 10) of the Examiner's Answer provides comments in the order of the grounds of rejection, and then claim by claim under each ground. Appellant uses the same ordering below.

First Ground of Rejection:

Claims 16-17:

The Examiner's Answer asserts that Harper anticipates "provisioning a second node to execute the application responsive to the detecting" with the failover process to enable restarting of the application on the secondary computer. The Examiner's answer relies on a dictionary definition of provisioning as the act or process of providing. (See Examiner's Answer, page 16, last paragraph). Appellant respectfully disagrees.

First, claim 16 also recites "attempting to failover the application from the first node to the second node". If the failover process is alleged to correspond to provisioning the second node, then there is no anticipation of attempting to failover the application. The Office Action asserted that "attempting to failover" is anticipated at col. 7, lines 62-67. However, this section refers to the same step and operation as col. 8, lines 11-16 (which the Office Action alleges to anticipate the provisioning features highlighted above). This step cannot simultaneously anticipate both the "provisioning" and the "attempting to failover" features of claim 16.

Second, the dictionary definition asserted by the Office Action is the definition of the NOUN provision. However, the part of speech of provision (or more particularly provisioning) in claim 16 is GERUND, which takes its meaning from the VERB. The dictionary definition of the VERB provision, from Webster's Tenth Edition, is "to supply with provisions". Clearly, providing the secondary computer that already is supplied with the provisions needed to execution the application is not the same as provisioning the second computer to execute the application. Once the definition for the proper part of speech is used, it is clear that the rejection is erroneous and must be reversed.

Second Ground of Rejection:

Claims 1-3, 13, 19-21, 30-33, and 38-41:

The Examiner's Answer attempts to overcome Mashayekhi's failure to teach adding a second node to the cluster and provisioning the second node to execute the application by referring to Appellant's specification and Fig. 2 (see Examiner's Answer, page 18, second paragraph). Specifically, the Examiner's Answer asserts that Appellant defines a cluster as a cluster of active nodes, citing the paragraph at the top of page 5 of Appellant's specification. Appellant respectfully disagrees.

First, Appellant notes that Fig. 2 does not show a cluster of two active nodes. Rather, the cluster 12A at the point illustrated in Fig. 2 includes the node 10A that is executing the application and the node 10D that has been added to the cluster but is not yet executing the application. See, e.g., Appellant's application, page 9, paragraph beginning on line 18. Rather, the node 10D begins executing the application after the failover shown in Fig. 3 (see, e.g., Appellant's application, page 9, paragraph beginning on line 29 and continuing to page 10). Accordingly, Fig. 2 illustrates a cluster with one node executing an application and an idle node, not only active nodes as asserted in the Examiner's Answer.

Second, Appellant respectfully submits that the term "cluster" has a well known meaning and Appellant has not defined "cluster" to mean "cluster of active nodes". A cluster of nodes is a set of one or more nodes managed by a cluster server to provide high availability of an application.

Third, even if Appellant had defined cluster to mean "cluster of active nodes", that would still not overcome Mashayekhi's clear failure to teach such a cluster. Mashayekhi's clusters include active nodes and passive nodes. It is improper to redefine Mashayekhi's cluster to exclude passive nodes to attempt to read on Appellant's claims. As noted in the Appeal Brief, such an interpretation of Mashayekhi's clusters is clearly contradicted by the plain language in Mashayekhi, in which the passive node is clearly

part of the cluster and **there is no cluster of active nodes the excludes the passive node.** For example, Mashayekhi teaches: "Another known failover policy utilizes a separate 'passive' node that is present in the cluster exclusively for the purpose of being the failover node for all active nodes in the cluster. As illustrated in the following graph, each node on the cluster that is actively running applications (nodes 1-3) fails over to node 4, which is not tasked with running any applications other than in the event of a failover." (Mashayekhi, col. 2, lines 60-67). Thus, it is clear that Mashayekhi's cluster is four nodes, three of which are active and one of which is passive. All four nodes are clearly part of the cluster, and the passive node is provisioned *a priori* to execute any application from nodes 1 to 3 in the event of a failover. Thus, in the cited section, all that occurs when a failover event is detected is the act of failing over itself.

Claims 4, 22, and 34:

With regard to claims 4, 22, and 34, the Examiner's Answer asserts that the Vert teaches "the second node has multiple boot capability, and wherein the provisioning comprises rebooting the second node from a partition that comprises one or more resources used by the application." Specifically, the Examiner's Answer asserts that a partition is another computer system. However, since the rejection of claim 1 has asserted that a node is computer system, Vert's teaching of restarting groups on another system has nothing to do with rebooting a node that has multiple boot capability from a partition (on that node), where the partition comprises resources used by the application.

Claim 8:

The Examiner's Answer continues to assert that "adding the first node to the plurality of nodes to be selectable for provisioning" as recited in claim 8 is taught by Vert. Specifically, the Examiner's answer asserts that claim 8 does not include the limitation that the first node is the node from which the application has failed over (see Examiner's Answer, page 19, last paragraph extending to page 20. **This assertion is clearly incorrect.** Claim 8 depends from claim 1, and thus inherits the limitations of claim 1. Claim 1 recites "failing the application over from the first node to the second node". Accordingly, the first node is clearly the node from which the application has

failed over.

Furthermore, the Examiner's Answer asserts that Vert's teachings regarding bringing previously failed systems back online teaches the above highlighted features. Appellant respectfully disagrees. Bringing a previously failed system back online merely makes it functional again in the cluster in which it was originally a member. This does not teach or suggest "adding the first node to the plurality of nodes to be selectable for provisioning" as recited in claim 8.

Claims 10, 12, 27, 29, and 36:

The Examiner's Answer repeats the position from the Office Action that Vert teaches "detecting that the performance of the application executing on the first node is less than a threshold performance level" as recited in claim 10. For the reasons highlighted in the Appeal Brief, Appellant respectfully submits that this position is erroneous.

Claims 11, 28, and 37:

The Examiner's Answer repeats the position from the Office Action that Vert teaches "the performance is less than the threshold performance level for at least a predefined time interval" as recited in claim 11. For the reasons highlighted in the Appeal Brief, Appellant respectfully submits that this position is erroneous.

Third Ground of Rejection:

Claims 5, 14, and 23:

Appellant refers to the reasons in the Appeal Brief to illustrate why the position in the Examiner's Answer is erroneous.

Claim 6:

The Examiner's Answer asserts that Mashayekhi teaches the second node is executing a different application when selected [to be provisioned for failover of the application from the first node], as recited in claim 6, reasoning that the node is running no applications prior to failover and running applications actively after the failover, indicating that the second node is executing a different application when selected (see Examiner's Answer, page 21, second paragraph under claim 6 heading. Appellant respectfully submits that the above reasoning itself indicates the erroneous position. The Examiner's Answer states that the node is running ***no applications*** prior to the failover. Thus, the node is not executing a different application when selected. Executing nothing (i.e. being idle) does not teach or suggest executing a different application.

Claim 15:

The Examiner's Answer repeats the position from the Office Action that Dinker teaches the features of claim 15. For the reasons highlighted in the Appeal Brief, Appellant respectfully submits that this position is erroneous.

Claim 18:

The Examiner's Answer repeats the position from the Office Action that Dinker and Vert teach the features of claim 18. For the reasons highlighted in the Appeal Brief, Appellant respectfully submits that this position is erroneous.

Fourth Ground of Rejection:

Claim 7 and 24:

Appellant refers to the reasons in the Appeal Brief to illustrate why the position in the Examiner's Answer is erroneous.

CONCLUSION

For the foregoing reasons, it is submitted that the Examiner's rejections of claims 1-8, 10-25, 27-34, and 36-41 are erroneous, and reversal of the decision is respectfully requested.

If any fees are due, the Commissioner is authorized to charge such fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5760-13900/LJM. This Appeal Brief is submitted with a return receipt postcard.

Respectfully submitted,

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